

## ABSTRACT

A method is disclosed to automatically segment 3D and higher-dimensional images into two subsets without user intervention, with no topological restriction on the solution, and in such a way that the solution is an optimal in a precisely defined optimization criterion, including an exactly defined degree of smoothness. A minimum-cut algorithm is used on a graph devised so that the optimization criterion translates into the minimization of the graph cut. The minimum cut thus found is interpreted as the segmentation with desired property